

Recycled Fiber Used In ShanYing Paper

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Contents

- I. Company profile
- **II.** The fiber raw material in Shanying
- **III.** The inspection flow chart of import waste paper
- IV. Properties of waste paper in papermaking











Anhui Shanying Paper Industry Co.,Ltd. was founded in 1957,It was successfully listed on Shanghai Stock Exchange in 2001.In 2013,the Company was restructred with Ji'an Group Co.,Ltd. realizing great-leap-forward development through powerful combination.Now It boasted an annual yield of 3.5 million tons paper and 1.2 billion m² cardboard and paper carton,ranking top within the industry in terms of scale.



Industrial Structure

The Company strive to build a

modern, environmentfriendly, sustainable and
internationally competitive
papermaking & packaging
enterprise, and make an effort to
implement the vision of 'Leading
recycling economy, Promoting
paper culture'.



Shanying Paper is the only one company in China, which sets recycled paper papermaking, packaging and logistics in the integral whole.



Papermaking

| Mill | Paper Machine | Capacity/ year | Main Products | | | |
|-------------------------|-----------------------------|-------------------|---|--|--|--|
| Ma'anshan Paper Mill | PM1;PM2; PM3;PM5; PM6 | 1,850,000 t | Kraft liner; News print; Linerboard; Corrugating medium | | | |
| Ji'An Group | PM11;PM12; PM13;PM15 | 1,650,000 t | Kraft liner; Linerboard; Corrugating medium; Coated white top kraft liner | | | |







Most of the equipment are bought from Valmet, Voith, KBC and Andritz. The GSM range is 50 to 250, Maximum width is 7920mm, The highest speed is 1600m/min.

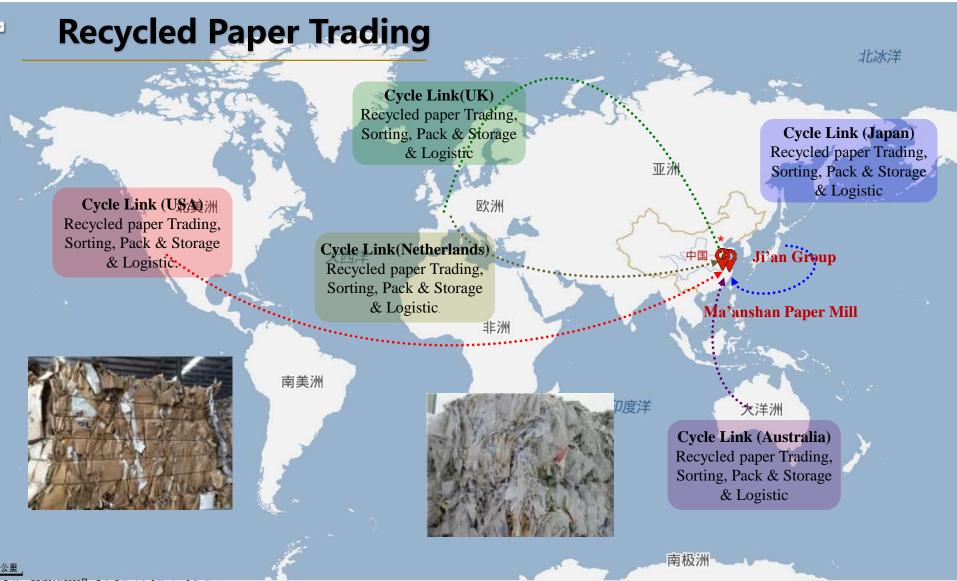






Intelligent and efficient packaging equipment, Implement custom production for customers.







II. The fiber raw material in Shanying

| | Import Waste paper | Local Waste paper | Wood Pulp | Totol |
|-------------------------|--------------------|-------------------|-----------|-------------|
| Ji'An Group | 1,201,600 t | 57,350 t | 700 t | 1,775,800 t |
| Ma'anshan Paper Mill | 1,453,100 t | 747,500 | 17,000 t | 2,217,600t |
| Totol | 2,654,700 t | 1,321,000 t | 17,700 t | 3,993,400 t |

We used 3.9934 million tons of fiber raw materials in 2016,including imported 2.6547 million tons of waste paper,accounted for 66.48%. The local waste paper 1.321 million tons,accounted for 33.08%, And 17,700 tons of wood pulp, accounted for 0.44%.

Comprehensively, waste paper accounted for **99.56**% of the total amount of fiber materials in the production.



Advantages of Cycle Link

- We have two papermaking mills,including 9 paper machines. We need about 2.7 million imported waste paper a year. Stability of aggregate demand, trade, coupled with the parent company--Shanying Paper abundant capital support, Cycle Link has long-term cooperation of imported waste paper suppliers.
- In order to ensure the quality of waste paper,we has strict inspection and claim process, It has played a good role in promoting for from the recycling source control.



The Inspection Standard for Import Waste Paper

| | | | The standard of Inspection | | | |
|------|------------------------|--|----------------------------|------------|----------|--|
| Sort | Commodity | Commodity define | Moisture | out-throws | Impurity | Remark |
| | US12# | Consists of double-sorted corrugated containers, generated from supermarkets and/or industrial or commercial facilities, having liners of test liner or kraft. Material has been specially sorted to be free of boxboard, off-shore corrugated, plastic, and wax | ≤12% | ≤2% | | Out-throws:paper tube, newspapers, maga zines, coated |
| occ | US11# | Consists of corrugated containers having liners of either test liner or kraft. | ≤12% | ≤5% | ≤1.5% | paper, ash bottom whiteboard, tectorial paper, gilt paper, deep dyed pulp papers, egg carton, etc. Impurities:plastic, c ans, tetra pak, wax paper and other non- paper, etc |
| | JP11# | Consists of corrugated containers having liners of either test liner or kraft. | ≤12% | ≤5% | _1 F0/ | |
| | E90/10 AU11# | Consists of corrugated containers having liners of either test liner or kraft. Generated from domestic and commercial use of waste paper. Brown mainly, and the amount of coating material must be controlled within the predetermined range. | ≤12% | ≤10% | | |

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The Inspection Standard for Import Waste Paper



| G . | Commodity | | The standard of Inspection | | | 5 1 |
|----------|-----------|--|-------------------------------|----------------|----------|--|
| Sort | | Commodity define | Moisture | out- throws | Impurity | Remark |
| | 37#(SOP) | Consists of paper, as typically generated by offices, containing primarily white and colored groundwood-free paper, free of unbleached fiber. May include a small percentage of groundwood computer printout and facsimile paper. sop contains no less than 90%, light paper contains no more than 5% | ≤12% | ≤5% | ≤1.5% | out-throws:coated paper,OCC,color paper,etc; Impurities:plastic,cans,tet ra pak,wax paper and other non-paper,etc. |
| Deinking | 10#(OMG) | Old Magazines:Made by bleached pulp or bleached jute pulp. Consists of baled coated magazines, catalogues and other similar printed materials. May contain a small percentage of uncoated news type paper. The proportion of uncoated black and white newspaper may not exceed 3%, Can not contain colored pulp. | ≤12% | ≤4% | ≤1.5% | out-throws: The proportion of uncoated black and white newspaper may nbot exceed 3%, The proportion of OCC, paper tube, ash bottom whiteboard, coated paper, etc. may not exceed 1% Impurities: plastic, cans, tet ra pak, wax paper and other non-paper, etc. |
| | US8#(ONP) | Consists of sorted, fresh newspapers, not sunburned, and other acceptable papers. This grade is to be relatively free from magazines and contain not more than the normal percentage of rotogravure and colored sections. Ratio og black & white is not below 60%. High quality waste paper, such as magazines, and office papers, are not claimed | ≤12% | ≤2% | ≤1.5% | out-throws:OCC, ash bottom whiteboard, deep dyed pulp papers, egg carton, etc; Impurities:plastic, cans, tet ra pak, wax paper and other non-paper, etc. |

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| | Commodity | • | The standard of Inspection | | | | |
|----------|-----------|---|-------------------------------|--|----------|--|--|
| Sort | | | Moisture | Out- | Impurity | Remark | |
| Deinking | 40#(SWL) | Consists of uncoated, printed or unprinted sheets, shaving, guillotined books, and cuttings of white groundwood-free ledger, bond, writing, and other paper which has similar fiber and filler content | ≤12% | ≤2% | ≤1.5% | out-throws:coated paper, OCC, color paper, etc; Impurities:plastic, c ans, tetra pak, wax paper and other non- paper, etc. | |
| | E-A9 | The mixture of newspapers and magazines, the proportion of magazines than 30%. High quality waste paper, such as SOP is not claimed | ≤12% | ≤2% | ≤1.5% | out-throws:The | |
| | A2、Mix | By a variety of different quality of paper and cardboard mixed, containsnewspaper, magazines, brochures, grey and brown cardboard, egg carton. white office paper, colourd paper, printing paper, envelopes, catalogues and telephone directories, etc. A very small amount of new and old OCC. | 12% | The material without the pulp | | the pulp; Impurities:plastic,c ans,tetra pak,wax paper and other non- paper,etc. | |
| | JP3# | Mixed compositin of waste paper with different quality. The waste paper is supplied through selection and packing | ≤12% | The material without the pulp | ≤1.5% | | |





Color coated paper







OCC

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III. The inspection flow chart of import waste paper

Different commodity go to Back to weight the empty container Take the weighing card different place to unload the cargo Print the scale tickets The inspector notify the driver to Take the imported waste paper tracking card Put the cargo stacking quantity. According to the table:the -Closed photo Take photos for unqualified cargo inspection standard of imported -Seal No.photo Record the bales for unqualifed waste paper cargo's content of -half-open photo Meanwhile to record the whole moisture, impurity and out-throw. container's quality -Open photo

Weighing of gross weight

Take picture for containers

Designated place to unload cargo

Inspect cargo Complete the unloading

Fill in imported waste paper tracking card

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Mosisture Detection

Remove the bales which were wet to the waiting zone. The inspector choose three ponit in three side.(Try to choose the average moisture point)



Unloading

second point



IV. Properties of waste paper in papermaking

Comparison of the different OCC

| Sort | Advantage | Weakness |
|------|------------------------|-------------------------------|
| AOCC | High strength, Clean, | Expensive, Lower L value |
| EOCC | cheaper,Higher L value | Dirty, Quality discrepancy |
| JOCC | Clean,Less Impurity | Strength is lower than AOCC |



Difficulty of using Waste paper In production

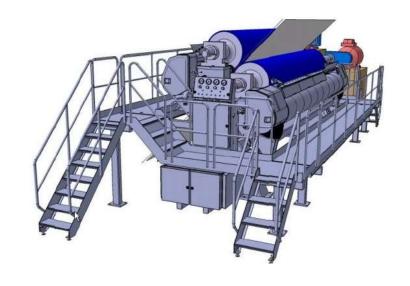
Intensity of paper production

SOLUTION

Starch,

Dry-Strength Resins and another Chemicals;

Surface sizing





Solid waste from production

Waste plastics: Come from the pulper, We built a plastics plant and a granulation plant. Waste plastics is used for granulation after cleaning. And the fiber from the cleaning is back to the pulp line.

Rejects: Come from the screen and cleaner.Most of them we use as raw material for corrugated medium.And others we increase the dryness up to 50% through press screw.Then sent to power plant burning.

Thanks!